

## STANDARD SEDIMENT AND EROSION CONTROL PLAN (SECP) FOR LOW RISK STREAM CROSSING BRIDGE DEACTIVATION

TABLE 1 – SECP BMPs for low risk crossings

DEACTIVATION						
TECHNIQUE	LEGEND	REF.	OBJECTIVES	BMP	LOCATION	TIMING OF INSTALLATION
LIMIT SITE DISTURBANCE		1	Ensure that the temporary crossing is installed in the designated location where environmental impacts will be minimal.	Do not ford the stream. Construct a temporary crossing structure using existing decking materials or other available materials outside the wetted perimeter of the stream (above or below crossing) based on the proposal, site specific variables and ministry approval.	The temporary crossing should be installed where the stream channel is narrow and where machine can access without causing damage to the streambed and streambanks.	Installation will occur after all deactivation procedures have been completed on the far side of the crossing.
		2	Protect soil from unnecessary disturbance which creates potential for erosion processes.	No grubbing outside of the road prism. If vegetation removal is necessary cut off (prune back) vegetation leaving root mass intact in soil. Store equipment and building materials away from existing vegetation where possible.	Within the limits of the contract.	During crossing deactivation.
		3	Protect soil from unnecessary disturbance which creates potential for erosion processes.	Flag riparian vegetation to be reserved immediately adjacent to the site. Vegetation promotes rainfall interception and infiltration. When clearing, prune back vegetation leaving root mass intact in soil.	Areas on both sides of the crossing where riparian vegetation has established.	Prior to removal of components of the crossing structure.
DRAINAGE MANAGEMENT		4	Prevent deleterious materials/debris from entering the stream channel.	Careful removal of bridge decking and associated materials. Sweep components clean prior to removal. Suspend geotextile/tarps under decking prior to removal to ensure debris does not enter the stream.	Beneath the crossing (decking) structure.	Prior to deck removal.
		5	Reduce ditch water concentration and allow for filtration of sediment-laden water through natural vegetation.	Install settling basin and wing ditches within ditch lines to transfer water out of the ditch minimizing flows entering the stream channel. Structure is designed to direct water out of the ditch line and away from the stream minimizing flow velocity and erosion potential.	Install as needed if evidence of high flows is prevalent in existing ditch lines.	During deactivation procedures.
		6	Install water bars to remove water from the road surface during rain events.	Installation of water bars will allow successful drainage of road surface during rain events. Water will be directed into ditch lines and surrounding riparian vegetation.	Install on both sides of the crossing (may need numerous water bars depending on road grade).	To be carried out sequentially (bush-side) first prior to removal of temporary crossing structure.
		7	Prevent rill/gully formation and prevent direct flow into the stream.	Crown road approaches slightly so that surface flow drains off to the side of the road and not directly down the road centerline into the stream.	Both sides of the stream crossing.	At project completion.
		8	Minimize excavation of terrain within the high water mark of the stream to prevent sedimentation of the stream.	Existing riprap and sill logs left in place if terrain within the high water mark of the stream is stable.	Both sides of the stream crossing.	Prior to project completion
		9	Prevent surface water from flowing down road grades and entering the stream channel.	Remove existing culverts immediately adjacent to the crossing and replace with cross drains. Construct berms and ditch blocks near the new cross drains to prevent surface flow from entering the stream channel at the deactivation site.	On both sides of the crossing near old culvert locations.	Prior to project completion.
EROSION CONTROL		10	Eliminate rain splash erosion.	Cover exposed soils if heavy rainfall is encountered.	Any exposed soils that may erode and be carried towards the stream.	Only if heavy rainfall is encountered.
		11	Reduce the overall slope length. Provide seeding catchment areas to aid in germination/infiltration.	Grade slopes to stable angle of repose. Surface roughening on all cut and fill slopes. Do not back blade when finishing slopes.	Entire site including fill slopes and exposed ditch lines.	Immediately after slopes are finished to grade.
		12	Eliminate adjacent sources of deleterious materials.	Endhaul waste materials to a location where they cannot erode and be carried to the stream. Grade, seed and mulch waste storage area.	All wastes (fills, woody debris, etc...) associated with the deactivation of the bridge crossing.	At project completion.
		13	Reduce exposure of soils to water during rain events and spring melt.	Seeding and hay mulching. Mulch acts as a protective layer that both deflects and absorbs flows, resulting in the prevention of erosion/rill formation and increases vegetation establishment success by preventing seeds from being washed away prior to germination.	All exposed slopes and soils.	Immediately after cut/fill slopes are finished/roughened to grade.
SEDIMENT CONTROL		14	Protect exposed soil surface in the long term by seeding (establishment of vegetation) and in the short term by covering with mulch.	Seeding and hay mulching.	All exposed/disturbed soils in ditches and slopes within the limits of the contract.	At completion of the deactivation project.
		15	Prevent sediments from entering stream channel.	Install silt fences if required. (note: these structures require periodic maintenance). Silt fences slow the flow of runoff water and aid in sediment deposition prior to entering the stream.	Both sides of the stream crossing at the toe of recently excavated fills.	At completion of the deactivation project.

### 1.0 Objectives

The primary objective of this SECP is to provide a generic plan for **low risk** stream crossing deactivation projects. Sediment delivery into the stream will be minimized during the deactivation by: (1) limiting site disturbance, (2) drainage management, (3) erosion control and (4) sediment control (in descending priority). Upon removal of the crossing and support structures, the stream channel will be re-established to exhibit pre-crossing characteristics representative of habitats both above and below the crossing. Low risk bridge deactivations typically include **free spanning structures set back from the stream edge, not in contact with flowing water.**

### 2.0 Critical Areas

Critical areas relating to the project include; all ditch lines which drain towards the stream, existing riparian vegetation, the stream banks within close proximity to footings/support structures associated with the crossing and the existing road surface approach to the bridge.

### 3.0 Timing

All deactivation activities will proceed in appropriate weather conditions. Once commenced, all works will be completed as soon as practicable. In addition, all deactivation procedures will be in accordance to the appropriate timing windows stated within the Reduced Risk Timing Windows and Measures for the Conservation of Fish and Fish Habitat for the Omineca Region. If the crossing has support structures (cribbing, footings, wing-walls, etc...) in contact with flowing water, deactivation activities are recommended to occur during periods of reduced flows. Where salmon species may be present, consult DFO for appropriate timing windows associated with specific salmon species.

### 4.0 Accountability

It is the responsibility of the contractor to ensure that this SECP, in conjunction with the *BC Timber Sales Prince George Business Area Environmental Management System*, are followed in their entirety.

Should an emergency occur (i.e. significant sediment release into the aquatic environment due to deactivation/forestry related activities), the event must be dealt with in accordance with the *BC Timber Sales Environmental Management System*, including site specific *Emergency Response Plans* and the *Emergency Response Manual*. Contact numbers and instruction for documentation of the incident are available in these plans.

### 5.0 Best Management Practices (BMPs)

While it is impossible to prevent sediment from leaving disturbed forest lands due to rainfall and snow melt, significant reductions can be realized. This plan does not address all possible mitigation measures that are available to implement; however, information has been incorporated to increase the effectiveness of the most common BMPs found in forestry stream crossing applications. Refer to Table 1 for recommended BMPs. For additional information, refer to the *BC Timber Sales Environmental Field Procedures*, the *Stream Crossing Guidebook* and the *Forest Road Engineering Guidebook*. All BMPs will be installed as per specifications in the *BC Timber Sales Sediment and Erosion Control Field Guide*.

### 6.0 Work Access Across Stream

Work access across the stream may be required during the deactivation of a stream crossing structure. During any such crossing, the streambed and streambanks must be adequately protected to prevent adverse environmental impacts. No unprotected stream crossings are permitted without first receiving approval. A temporary work bridge is highly recommended to aid in the crossing (i.e. deck module, puncheon, rocks, logs, rubber mat, etc...). The temporary crossing site must be fully restored upon project completion (i.e. re-contoured, planted and mulched). Other than the approved stream crossings, machinery will work from the stream bank and stay out of the wetted perimeter at all times.

### 7.0 Contingency Plans

Contingency plans are additional mitigation measures that will be employed if unforeseen environmental concerns are encountered during construction. These plans include having extra sediment/erosion control materials on-site and halting operations if heavy or persistent rainfall is encountered.

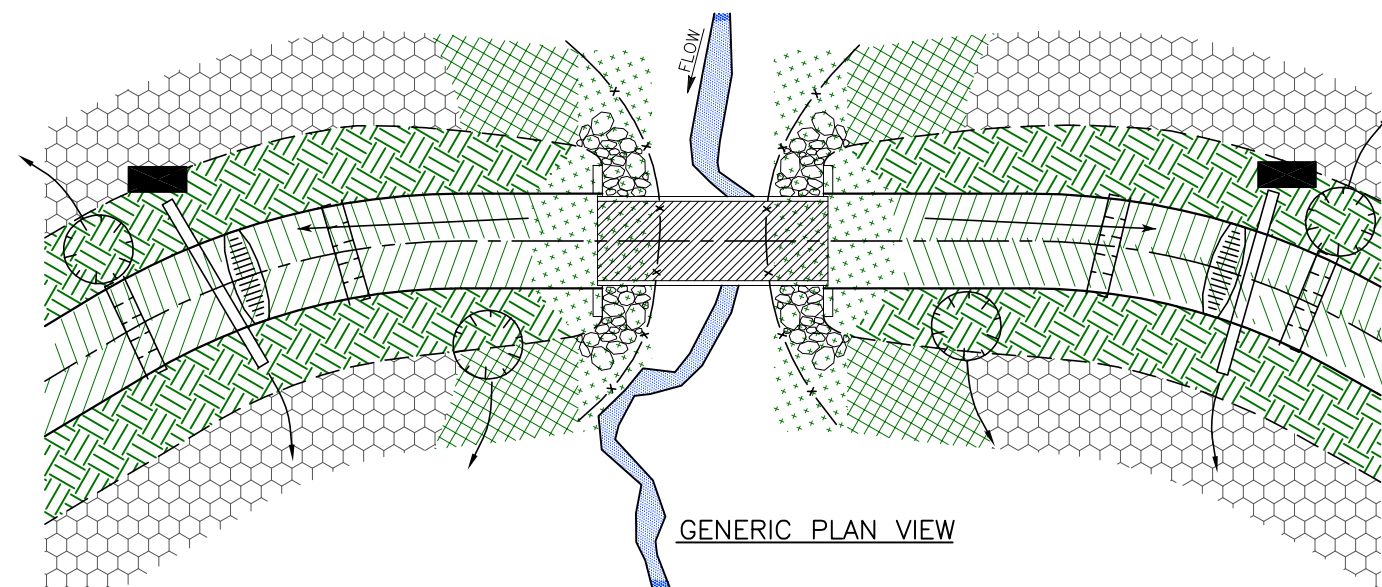
An emergency supply of sediment control materials must be available on-site which may include; silt fencing, geotextile, tarps, sandbags, seed, straw bales and volume pumps with discharge hose.

If works are temporarily suspended due to heavy precipitation, the site must be monitored during the shutdown period to ensure environmental concerns are adequately addressed.

Should unanticipated site conditions or unseasonably wet weather be encountered during the deactivation, the BC Timber Sales representative must be immediately contacted to reassess the project. If increased environmental risk is perceived, site specific plans/measures may be required.

### 8.0 Inspection and Maintenance

During the deactivation, inspections of the BMPs must be made, especially after heavy precipitation events. If any measure is not functioning as intended, it must be immediately repaired/replaced. All inspections and actions shall be documented.



PROJECT TITLE	<b>BCTS-SECP-B</b>		DESIGNED BY:	BAA, RPBio
PROJECT LOCATION(S)			RT, BCTS E.O.	
DATE	DRAWING NAME:	REV.:	CHECKED BY:	WG
NAME	08/06/06		DRAWN BY:	WG
SIGNATURE	DATE ISSUED:			
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CONTRACTOR				